DOCKET NO.: MSFT-3028/307006.01 PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Peter Carlin, et al.

**Application No.: 10/776,371** 

Filing Date: February 10, 2004

Confirmation No.: 3190

Group Art Unit: 2168

Examiner: Morrison, Jay A.

For: SYSTEMS AND METHODS FOR HOSTING THE COMMON LANGUAGE

RUNTIME IN A DATABASE MANAGEMENT SYSTEM

DATE OF DEPOSIT: NOVember 8, 2006

I HEREBY CERTIFY THAT THIS PAPER IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS FIRST CLASS MAIL, POSTAGE PREPAID, ON THE DATE INDICATED ABOVE AND IS ADDRESSED TO THE UNITED STATES PATENT AND TRADEMARK OFFICE IN BOX 1450, ALEXANDRIA,

YPED NAME: Jonathan M. Waldman REGISTRATION NO. 40,861

Mail Stop Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

## INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 CFR § 1.56 and in accordance with 37 CFR §§ 1.97-1.98, information relating to the above-identified application is hereby disclosed. Inclusion of information in this statement is not to be construed as an admission that this information is material as that term is defined in 37 CFR § 1.56(b).

In accordance with § 1.97(b), since this Information Disclosure Statement is being filed either within three months of the filing date of the above-identified application, within three months of the date of entry into the national stage of

	the ab	ove identified application as set forth in § 1.491, before the mailing date
	of a fi	irst Office Action on the merits of the above-identified application, or
	before	the mailing date of a first Office Action after the filing of request for
	contin	ued examination under § 1.114, no additional fee is required.
$\boxtimes$	In acc	ordance with § 1.97(c), this Information Disclosure Statement is being
	filed a	fter the period set forth in § 1.97(b) above but before the mailing date of
	either	a Final Action under § 1.116 or a Notice of Allowance under § 1.311, or
	before	an action that otherwise closes prosecution in the application, therefore:
		Certification in Accordance with § 1.97(e) is attached; or
		The fee of $$180.00$ as set forth in $$1.17(p)$ is attached.
	In acc	ordance with § 1.97(d), this Information Disclosure Statement is being
	filed a	after the mailing date of either a Final Action under § 1.113 or a Notice
	of All	owance under § 1.311 but before, or simultaneously with, the payment
	of the	Issue Fee, therefore included are: Certification in Accordance with §
	1.97(e	e); and the submission fee of \$180.00 as set forth in § 1.17(p).
$\boxtimes$	Copie	s of reference numbers 1 thru 82, 96 thru 108, 113 listed on the
	attach	ed Form PTO-1449 are enclosed herewith.
$\boxtimes$	Copie	s of reference numbers 83 thru 95, 110 thru 112 on the attached Form
	PTO 1	1449 are not required to be submitted pursuant to 37 CFR § 1.98(a)(2)(i).
		Copies of references - are not being submitted because
		they were previously cited by or submitted to the U.S. Patent and
		Trademark Office in patent application number , filed for
		which a claim for priority under 35 U.S.C. § 120 has been made in the
		instant application.

9

## DOCKET NO.: MSFT-3028/307006.01 - 3 -

**PATENT** 

Please charge any deficiency or credit any overpayment to Deposit Account No. 23-3050. This form is submitted in duplicate.

Date: No vember 8, 2006

Jonathan M. Waldman Registration No. 40,861

WOODCOCK WASHBURN LLP One Liberty Place - 46th Floor Philadelphia, PA 19103

Telephone: (215) 568-3100 Facsimile: (215) 568-3439

© 2006 WW



		THAN BURNEY			
Form PTO-	1449 Modified	Docket No. MSFT-3028/307006.01	Application No. 10/776,371		
Cited by	and Publications y Applicant neets if necessary)	Applicant Peter Carlin, et al.			
	ent of Commerce rademark Office	Filing Date February 10, 2004	Group <b>2168</b>		
		Confirmation No. 3190			
OTHER	DOCUMENTS (Incl	uding Author, Title, Date, Pe	ertinent Pages, Etc.)		
. 1		ombining Language and Datab t Environment", OOPSLA Pro	pase Advances in an Object- oceedings, October 4-8, 1987,		
. 2	Beard, et al., "Multile	vel and Graphical Views of Moin Digital Libraries, 1998, 250			
3		of Electronics and Computer S	ring in Microcosm: An Extended cience, University of		
	Berg, C., How Do I Co 98-101	reate Persistent Java Objects?	Dr. Dobb's Journal, <b>1997,</b> 22(4),		
	Bhattacharya, S. et al., "Coordinating Backup/Recovery and Data Consistency Between Database and File Systems", International Conference on Management of Data and Symposium on Principles of Database Systems, Proceedings of the 2002 ACM SIGMOD International Conference on Management of Data, 2002, 500-511				
	Biliris, A., "The Perfo	rmance of Three Database Sto SIGMOD, 1992, 276-285			
7	Booch, G. Benjamin/C Design with Applicati	Cummings Publishing Co, "Obons", <b>1994</b> , 155, 156, 179-183			
. 8	Base Management Sys 1976, 125-147	Logical Associations in Data Modelling", Modelling in Data tems G.M. Nijssen, (ed); North Holland Publishing Company:			
9	Buneman, P. et al., Inl ACM, 1986, 4-15		ntabase Programming Languages,		
10	Concurrent Object – C	rent Aggregates (CA) – Design Driented Language Based on A g, <b>1995</b> , 25(2), 174-196	and Experience with a ggregates", J. Parallel and		
EXAMINER		DATE CONS	DEDED		





Form F	PTO-	-1449 Modified	Docket No. MSFT-3028/307006.01	Application No. 10/776,371		
Ci	ited b	and Publications y Applicant heets if necessary)	Applicant Peter Carlin, et al.			
		ent of Commerce rademark Office	Filing Date February 10, 2004	Group <b>2168</b>		
			Confirmation No. 3190			
ro	THEF	R DOCUMENTS (Includ	ing Author, Title, Date, Po	ertinent Pages, Etc.)		
•	11	, ,	osiomos, et al. "Geometric Structures", MTS Journal, 2	Modeling Issues in Computer 22(2) pp 15-33		
	12	Windows", PR Newswire	nes Design Automation Deve, Financial News, <b>Jan. 10</b> ,	1995		
	13	D'Andrea, A. et al., "Uni	nisql's Next Generation Object-Relational Database  ACM SIGMOD Record, September 1996, 25(2), 70-76			
	14	Darby, C., "Object Serial Techniques, 1997, 2(9), 5	lization in Java 1.1. Making	Making Objects Persistent, WEB		
	15					
	16	Geometry", Software-Pro	et al., "TGMS: An Object-Oriented System for Programming ractice and Experience, Oct 1989, 19(10), 979-1013			
1	17	Dobashi, Y. et al, "Skylig Forum, 1994, 13(3), C85	ght for Interior Lighting De	sign", Computer Graphics		
	18	Acquires the Assets to A New, Jan.16, 1995, 4 page	ltium's P-CAD Business Unges	PCB Unit-Accel Technologies nit", EDA Licensing, Electronic		
	19	Transactions on Databas	se Systems, Dec 2000, 25(4)	ng an Effective Calculus", ACM , 457-516		
	20	Conference on Object-On Applications, <i>OOPSLA</i> ,	ract Soundness for Object-Oriented Programming System 2001, 15 pages	ms, Languages, and		
	21	Foley et al., Computer G Wesley Publishing Comp	raphics: Principles and Prac pany, 1990, Ch. 5 and 9, pp	ctices, Second Edition, Addison- . 201-283		
EXAMINER			DATE CONS	IDERED		



Sheet 3 of 12

Form PTO-	1449 Modified	Docket No MSFT-30	28/307006.01	Application No. 10/776,371
Cited by	and Publications Applicant neets if necessary)	Applicant Peter Carlin, et al.		
	ent of Commerce rademark Office	Filing Dat February		Group <b>2168</b>
		Confirmat 3190	ion No.	
OTHER	DOCUMENTS (Includ	ing Author	, Title, Date, Pert	inent Pages, Etc.)
	Issues in Geographic Dat	a Modeling	," November 200	g: Requirements and Research 1, Proceedings of the 9th ACM
	International Symposium			
	Value Substitutability", I	I, "A RISC-Microcontroller Based Photovoltaic System for ons", APEC 2000. Fifteenth Annual IEEE Applied Power and Exposition, February 6-10, 2000, 2, 1151-1156 ated Operating Systems The Logical Design", Addison-		
24	Garret, J.H., Jr. et al, "Ar			
	Design and Construction 1989, Document No. 89-			
	Illumination Applications			
26				
27	Harrison, C.J. et al., "Stra Inference", IEEE, 2000,		ors: User-Defined	Гуре Values and Туре
28	Haverlock, K., "Object S 23(8), 32, 34, 36-37	erialization		Dr. Dobb's Journal, <b>1998</b> ,
	Hay, David C, "Data Mo Publishing, New York, N	IY <b>1996,</b> 47	-67, 235-259	
	Hernandez, M.A. et al, "International Conference Database Systems", <i>Proc</i>	on Manage	ement of Data and	Symposium on Principles of
	Conference on Managem			into D International
31	Hsiao, H.I. et al., "DLFM	1: A Transa	ctional Resource N	Nanager", SIGMOD, Conference on Management
EXAMINER			DATE CONSID	ERED



Sheet 4 of 12

Form P	ГО-	1449 Modified	Docket No. MSFT-3028/307006.01	Application No. 10/776,371			
Cit	ed b	and Publications y Applicant heets if necessary)	Applicant Peter Carlin, et al.				
		ent of Commerce rademark Office	Filing Date February 10, 2004	Group <b>2168</b>			
			Confirmation No. 3190				
OTI	HER	R DOCUMENTS (Includ	ling Author, Title, Date, Pe	ertinent Pages, Etc.)			
	32	Kaneko, K, et al, "Desig	n of 3D CG Data Model of N	Move Animation Database			
				ment Series, vol. 3, Proceedings			
:			Workshop On Future Databa				
	33		ds Dynamics Animation on				
				rch and Development Series,			
		vol. 4, Database Systems	ms for Advanced Applications 1993, 3-10				
	34		Unified Framework for Version Modeling in Engineering				
	2.5		uting Surveys, 1990, 22(4), 3				
	35		Framework for 3D Modeling Constraint-Based Description and etric Modeling", A Collection of Contributions based on the 2d Toyota Conference, Organization of Engineering				
				grated Manufacturing, Japan,			
		Oct. 2-5, <b>1988</b> , 325-357	moderning in companer imag	, area nzamyaeum mg, capazz,			
	36		ps on Windows 3.1 Bandwa	gon", Computer Aided			
		Engineering, 1993, 24-2					
	37		rmance Evaluation of Storing	XML Data in Relational			
			Systems, WIDM, 2001, 31-38				
	38	Khoshafian, S. et al, "Ol	oject Identify", OOPSLA'86,	<b>1986,</b> 21, 406-416			
	39	Kiesling, R., "ODBC in	UNIX Environments", Dr. 1	Dobb's Journal, December			
		<b>2002</b> , 27(12), 16-22	·				
	40			ementation and Exploitation of			
			ge Structures", Proc. 8.sup.th				
			ses), pp. 64-84 (York 1990)				
	41		c Models for CAD/CAM", A	Machine Design, July 24, 1990,			
		99-105	1 (D : D : C:	1 Factor of an Hair a Objecta?			
	42			d Extraction Using Objects",			
		Concurrent Engineering	: Research and Applications				
EXAMINER			DATE CONSI	DERED			





			Docket No.	Application No.	
Form I	PTO.	-1449 Modified	MSFT-3028/307006.01	10/776,371	
Ci	ited b	t and Publications y Applicant heets if necessary)	Applicant Peter Carlin, et al.		
		ent of Commerce rademark Office	Filing Date February 10, 2004	Group <b>2168</b>	
			Confirmation No. 3190		
Ol	THE	R DOCUMENTS (Includ	ing Author, Title, Date, Pe	rtinent Pages, Etc.)	
	43	Languages", ACM Comp	uting Surveys, December 20	ented Database Programming <b>02</b> , 34(4), 409-449	
	44	Systems", IEEE Trans. o		neering, 2002,14(6), 1330-1346	
	45		A Set-Oriented Meta-Interpalates Debugging", Lecture		
	46	Mariani, J. A., Oggetto: ' The Computer Journal,	: "An Object Oriented Database Layered on a Triple Store", 1992, 35(2),108-118		
	47			", Bell Laboratories, August	
	48	"Mechanical Design Soft 1993, 12(12), 32-36		puter-Aided Engineering, <b>Dec</b>	
	49	<b>2001</b> , 30(1), 70-77		Oata", SIGMOD Record, March	
	50	<b>1990</b> , 139-143	•	nusetts Institute of Technology,	
	51	ACM, September 1992,	35(9), 112-123	bases," Communications of the	
	52	Nelson, M. et al, "Generi	c Support for Caching and In Operating Systems, Oct 19	Disconnected Operation", 4th	
EXAMINER			DATE CONSI		



Sheet 6 of 12

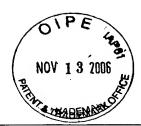
Form P	Form PTO-1449 Modified  List of Patent and Publications Cited by Applicant (Use several sheets if necessary)			28/307006.01	Application No. 10/776,371	
Ci				Applicant Peter Carlin, et al.		
		nent of Commerce Trademark Office	Filing Dat February		Group <b>2168</b>	
				ion No.		
ОТ	HEF	R DOCUMENTS (Includ	ling Author	, Title, Date, Pert	inent Pages, Etc.)	
	53 Nijssen, G.M. et al., "Concept Oriented Approach", <i>Departm</i> <i>Prentice Hall</i> , 10-33, 42-43, 4			Computer Science		
	54			y Processing in the Object Store Database System", ACM Conference on Management of Data, June 1992, 21(2),403-sualisation of Distributed Applications for Performance ates in Computer Science, January 2001, 2074, 831-840 atorial Approach to Content-Based Music Selection", and Systems, Jun 7, 1999, 457-462		
	55					
	56	Ottogalli, F.G. et al., "Vi	isualisation otes in Com			
	57	Pachet, et al, "A Combin	natorial App			
:	58	Papiani, M. et al, "A Dis SQL/MED", SIGMOD R	tributed Sci Record, Sept	entific Data Archivember 1999, 28(3	ve Using the Web, XML and ), 56-62	
	59	1993), OMG TC Docume	ent 93.7.5, 1	-24	lity White Paper", (Jul. 2,	
	60	to IBM-Standard Person	al Computi	ng, <b>1993,</b> 12(4), 25		
	61	Applications", Virtual So	olutions, 19	95, 9 pages	nt/Server Model with ESRI	
	62	Read, III, B.C., "Develoy Aerospace and Electronic			kpit Display System", IEEE 1(10), 25-28	
EXAMINER				DATE CONSID		





Form P	TO.	-1449 Modified	Docket No. MSFT-3028/307006.01	Application No. 10/776,371	
Ci	ted b	and Publications y Applicant heets if necessary)	Applicant Peter Carlin, et al.		
		ent of Commerce rademark Office	Filing Date February 10, 2004	Group <b>2168</b>	
			Confirmation No. 3190		
ОТ	HEF	R DOCUMENTS (Inclu	ding Author, Title, Date, Pe	ertinent Pages, Etc.)	
	63	Rouse, N.E., "CAD Pio 59(25),117-122	neers are Still Trailblazing",	Machine Design, Oct. 22, 1987,	
	64	Roussopoulos, N. et al.,	"Using Semantic Networks upplemental VLDB Conferen	for Data Base Management", ce, 1975, 144-172	
	65	for Concurrent Design I Concurrent Engineering 83	Process", Proceedings of the g, May 4-6, 1993, Simulation	in Concurrent Engineering, 71-	
	66	Seshadri, P., "Enhanced VLDB Journal, The Intel 140	Abstract Data Types in Object of the Object	ect-Relational Databases", The arge Databases, 1998, 7, 130-	
	67		Database Technology: Management for the Year 2000, 1995, Morgan Kaufmann Publishers		
	68	Sreenath, N., "A Hybrid Mathematics and Comp	Computation Environment in terms in Simulation, 1992, 12	1-140	
	69	Singhal, A. et al., "DDF Association for Comput	3: An Object Design Data Mater Machinery, 1993, 467-470	inager for VLSI CAD",	
	70	Stevens, T., "Value in 3	-D", Industry Week, January	<b>8, 1995,</b> 45-46	
	71	Stonebraker, M., "The O	Case for Partial Indexes", SIC	GMOD Record, <b>1989</b> , 18(4), 4-9	
	72		section of Relational and Object XVII, March 14-17, 1994,	ect", Proceedings of the AM/FM 69-75	
EXAMINER			DATE CONSI	DERED	





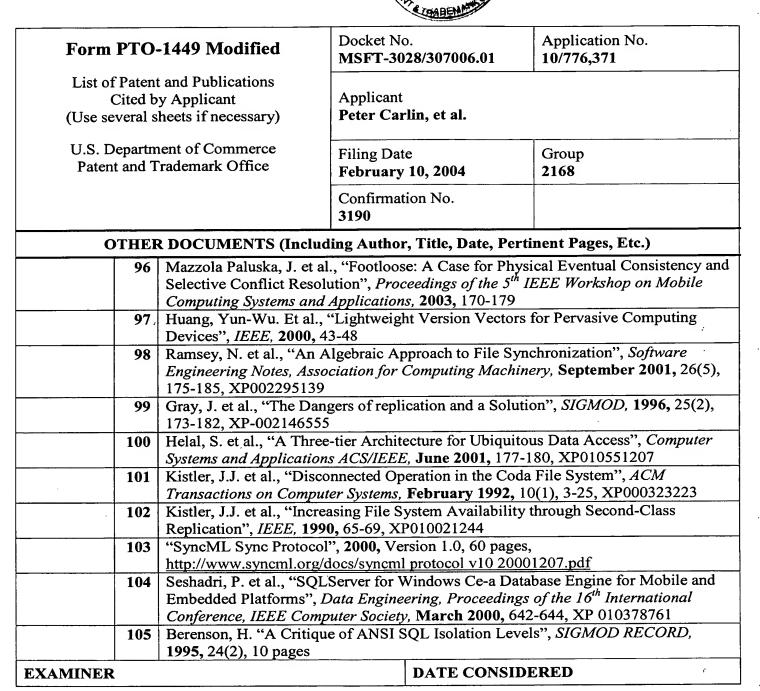
Form PI	ГО-	1449 Modified	Docket No. MSFT-3028/307006.01	Application No. <b>10/776,371</b>		
Cite	ed by	and Publications y Applicant heets if necessary)	Applicant Peter Carlin, et al.			
_		ent of Commerce rademark Office	Filing Date February 10, 2004	Group <b>2168</b>		
			Confirmation No. 3190	,		
OTF	HER	DOCUMENTS (Inclu	ding Author, Title, Date, Pe	rtinent Pages, Etc.)		
	73	Sutherland, J. et al., "The Integration of Object-On States of the Art and Pro	ne Hybrid Object-Relational Ariented and Relational Technologicae, 1993, 326-333	Architecture (HORA), An ology", Applied Computing:		
	74	Suzuki, H. et al., "Geom Third international Con	ometric Modeling for Modeling Products", Proceedings of the inference on Engineering Graphics and Descriptive Geometry, nna Austria, 2, 237-243  A Specification Environment for Configuring a Discrete-Part in Simulation Infrastructure", International Conference on Description, October 17-20, 1993, 1, 349-354			
	75	Sreekanth, U. et al., "A Manufacturing System S				
	76	Taylor, R.H. et al., "An <i>IEEE</i> , <b>July 1983</b> , 71(7).	in Integrated Robot System Architecture", Proceedings of the			
	77	Varlamis I. et al., "Bridge	ging XML-Schema and Relat ating Relational Databases us	ional Databases. A System for sing Valid XML Documents",		
	78	Wilcox, J., "Object Data Dobbs Journal, Novem	abases-Object Methods in Diber 1994, 19(13), 26-34	·		
	79	Watanabe, S., "Knowled Computer-Aided Archite	dge Integration for Architectuectural Design, 1994, 123-14	aral Design", Knowledge-Based 6		
	80	Computer Networks and	Metadata Standards for Met ISDN Systems, 1998, 30, 23	-32		
	81	IEEE Multimedia, IEEE	t-Based Classification, Searce Computer Society, 1996, 3,	27-36		
	82	Yoshikawa, M. et al., "	XRel: A Path-Based Approacg Relational Databases", ACM	h to Storage and Retrieval of		
EXAMINER		<u> </u>	DATE CONSI	DERED		





Form PTO-1449 Modified				Docket No. Application No. MSFT-3028/307006.01 10/776,371			
	Cite	ent and Publications d by Applicant al sheets if necessary		Applicant Peter Carlin, et al.			
		rtment of Commerce d Trademark Office	:	Filing Date February 10, 2004	Group <b>2168</b>		
				Confirmation No. 3190			
	. —	U. S	S. PATENT	DOCUMENTS			
Examiner Initial		Document No.	Date	Name	Class	Subclass	
	83	2002/0091702 A1	07/11/02	Mullins	707	100	
	84	2002/0198891 A1	12/26/02	Li, et al.	707	102	
	85	5,893,106	04/06/99	Brobst, et al.	707	102	
	86	5,900,870	05/04/99	Malone, et al.	345	333	
	87	6,047,291	04/04/00	Anderson, et al.	707	103	
	88	6,108,004	08/22/00	Medl	345	346	
	89	6,112,024	08/29/00	Almond, et al.	395	703	
	90	6,199,195 B1	03/06/01	Goodwin, et al.	717	1	
	91	6,338,056 B1	01/08/02	Dessloch, et al.	707	2	
	92	6,370,541 B1	04/09/02	Chou, et al.	707	103	
	93	6,519,597 B1	02/11/03	Cheng, et al.	707	10	
	94	6,556,983 B1	04/29/03	Altschuler, et al.	706	55.	
	95	6,578,046 B2	06/10/03	Chang, et al.	707	103	
		FORE	IGN PATI	ENT DOCUMENTS			
Examiner		D	D-4-	Country		nslation	
Initial		Document No.	Date	Country	YES	NO	
EXAMINER	L	l		DATE CONSIDERED		<del></del>	





Form 1	Form PTO-1449 Modified			Docket No. Application No. 10/776,371		
C	List of Patent and Publications Cited by Applicant (Use several sheets if necessary)		Applicant Peter Carlin, et al.			
	U.S. Department of Commerce Patent and Trademark Office			e 10, 2004	Group <b>2168</b>	
			Confirmat 3190	ion No.		
O'	THEF	R DOCUMENTS (Includ	ing Author	, Title, Date, Perti	nent Pages, Etc.)	
	106	Greenwald, R. et al., "Or Concurrency, 1999, Ch.	7, 7 pages, 2	XP-002312028	·	
	107	Plattner, C. et al., "Ganymed: Scalable Replication for Transactional Web Applications", <i>IFIP International federation for Information Processing</i> , <b>2004</b> , 15 174, XP-002370197				
	108	Shapiro, M. et al., "Mana 185-193, XP-000922048		ases with Binary La	arge Objects", IEEE, 1999,	
			· · · · · ·			
					·	
EXAMINER				DATE CONSIDI	ERED	



Sheet 12 of 12

For	rm PT	O-1449 Modifie	ed	Docket No. Application No. 10/776,371			
	Cite	tent and Publication d by Applicant al sheets if necessar		Applicant Peter Carlin, et al.			
		rtment of Commerc d Trademark Office		Filing Date February 10, 2004	Group <b>2168</b>		
				Confirmation No. 3190			
		U.	S. PATENT	Γ DOCUMENTS	· · · · · · · · · · · · · · · · · · ·		
Examiner Initial		Document No.	Date	Name	Class	Subclass	
	110	6,085,192	07/04/00	Mendez, et al.	707	10	
	111	6,151,606	11/21/00	Mendez	707	201	
	112	6,708,221 B1	03/16/04	Mendez, et al.	709	248	
	<u>]</u>	FORI	EIGN PATE	ENT DOCUMENTS	L		
Examiner					Tra	nslation	
<b>Initial</b>		Document No.	Date	Country	YES	NO	
	113	WO 02/075539 A2	09/26/02	PCT			
,	<u> </u>		1	DATE CONSIDERED		<u> </u>	